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HARNESSE, DICKEY & PIERCE, P.L.C.  
P.O. BOX 8910  
RESTON, VA 20195

EXAMINER

MYERS, PAUL R

ART UNIT PAPER NUMBER

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/725,393  
Filing Date: November 29, 2000  
Appellant(s): DAS ET AL.

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Gary D. Yacura  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 8/10/05 appealing from the Office action mailed 1/4/05.

*Handwritten initials*

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

The amendment after final rejection filed on 4/4/05 has been entered.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. The changes are as follows: Applicants statement in the after final Amendment that the New claim 24 is somewhat similar to claims 1 and 10 and does not raise new issues is accepted. The examiner notes that new claim 24 is closer to claim 6 then claim 10. New claim 24, which is substantially identical to claim 6 dependent on claim 1, will be rejected

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under the same grounds as claim 6 which is Bruckman PN 2002/0051466 in view of AAPA, Tiedemann, Jr., et al PN 5,914,950 and further in view of Buchholz et al PN 5,337,313.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

2002/0051466	Bruckman	5-2002
5,914,950	Tiedemann, Jr., et al	6-1999
5,337,313	Buchholz et al	8-1994

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-5, 14, and 16-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bruckman PN 2002/0051466 in view of Applicants admitted prior art and Tiedemann, Jr. et al PN 5,914,950.

In regards to claims 1, 2, 14, 16, 18, 20-21 and 23: Bruckman teaches channel coding packets to produce channel coded packets (See abstract); and puncturing (fragmenting) and/or

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repeating (transmitting) the channel coded packets to produce a first sub-packet (fragment) having a first size based on a size of the packet and a first data transmission rate at which the first sub-packet is to be transmitted (See abstract and paragraph 0026). Bruckman teaches the dynamic transmission rate control above. Bruckman et al also teaches the first data transmission rate is based on first measured channel conditions however these conditions are measured at the front end not the receiver. Applicants admitted prior art teaches using measuring channel conditions at the receiver and transmitting either the channel conditions or the desired transmission rate based upon the channel conditions to the transmitter. (see page 1 lines 26-32). It would have been obvious to a person of ordinary skill in the art at the time of the invention to use the receiver condition measurements because this would have allowed for considering the entire channel not just a small part. Tiedemann, Jr. et al teaches the transmitter selection a transmission rate that is different from and based upon the desired maximum transmission rate of the receiver (Column 11 line 43 to Column 12 line 22 and figure 8 step 224). It would have been obvious to use a data transmission rate that is different from and based upon the desired maximum transmission rate of the receiver because this would have taken into account factors such as power requirements and other transmitters (see Tiedemann, Jr. et al Column 11 line 43 to Column 12 line 22)

In regards to claim 3: Bruckman et al teaches recombining the sub-packets (by reassembler 34).

In regards to claims 4-5: Bruckman et al teaches the size of each fragment being individually determined and the size being variable within a range since packets are digital the

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sizes have only a discrete number of possibilities. Thus Bruckman et al teaches both the fragments being different sizes and the fragments being of the same sizes.

In regards to claims 17, 19 and 22: applicants admitted prior art teaches the use of a NACK message.

2. Claims 6-13 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bruckman PN 2002/0051466 in view of applicants admitted prior art and Tiedemann, Jr. et al PN 5,914,950 as applied to claim 1 above, and further in view of Buchholz et al PN 5,337,313.

In regards to claims 6-7, and 24: Bruckman teaches the dynamic packet size and rate as described above. Bruckman teaches adding a packet start and a packet end in accordance with the FRF.12 protocol instead of adding a packet size identifier. Bruckman states that while the invention is described in conjunction with the FRF.12 protocol it is not to be limited to that protocol. Bruckman also gives an example of the ATM protocol which includes a five-byte header but does not give details of the header information. Buchholz et al teaches a packet reassembly header (406) that includes a packet length field (660). It would have been obvious to a person of ordinary skill in the art at the time of the invention to include a packet size identifier because this would have allowed for the receiver front end to handle packet reassembly more efficiently.

In regards to claims 8 and 12: Bruckman teaches transmitting the fragments based upon their individual transmission rates. Bruckman also expressly teach modulating the data (Paragraph 0028 "modems"). Modem stand for Modulator/demodulator.

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In regards to claims 9 and 13: Bruckman states that it is not required to inform the receiver of the transmission rate however it is advantageous to provide the rate information to the receiver/reassembler paragraph 0027.

In regards to claims 10-11: Buchholz et al teaches a protocol field that indicate the packet protocol (670).

#### **(10) Response to Argument**

In regards to applicants argument that Bruckman determines fragment sizes into which the packets are divided based on the transmission rate. Bruckman fails to teach or suggest at least "puncturing and/or repeating channel packets," to produce a first sub-packet "based on a size of the encoder packet" as set forth in claim 1: The examiner disagrees. While the examiner agrees that the size of the sub-packets in Bruckman is based on the transmission frequency, the size of the sub-packets is also based on the size of the input encoder packet. When the input packet does not exceed the determined fragment size then the size of the output packet is based entirely on the size of the input packet. A tutorial of how Bruckman works is herewith included. The values for fragmentation size are obtained from Bruckman Table I.

The examiner will use as an example an the input packet size is 3072 bits = 384 bytes (the size of applicants input packet Figure 3). The examiner for simplification will also disregard overhead.

If the transmission frequency is 2300, the dynamic fragment size = 1427. Since  $384 < 1427$  the output sub-packet size is 384 which is dependant upon the input packet size. This corresponds to the claimed "repeating the channel coded encoder packet to produce a first

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encoder sub-packet" (the 384byte packet) "having a size based on the size of the encoder packet and a first data transmission rate at which the first encoder packet is to be transmitted". The size = 384bytes and the rate = 2300kbps.

If the transmission frequency is 512, the dynamic fragment size = 310. Since  $384 > 310$  the output sub-packet sizes are 310 and 74 respectively. The 74 byte packet size is dependent upon the input packet size. This corresponds to the claimed "puncturing the channel coded encoder packet to produce a first encoder sub-packet" (the 74byte packet) "having a size based on the size of the encoder packet and a first data transmission rate at which the first encoder packet is to be transmitted" The size = 74bytes and the rate = 512kbps.

If the transmission frequency is 128, the dynamic fragment size = 70. Since  $384 > 70$  the output sub-packet sizes are 70, 70, 70, 70, 70 and 34. The 34 byte packet size is dependant upon the input packet size.

This is simplified in that the user can also set variables such as MaxL\_In for the maximum length packet the transmitter can accept, and MinL\_Fr which is the minimum fragment length. The examiner further notes that the claim language is presented in the alternative with puncturing or repeating. Bruckman teaches both puncturing and repeating.

In regards to applicants argument that the actual size of the datagram received at the transmitter merely triggers the fragmenting of the received datagram and is not used in determining size of the packet fragments: The examiner has already explained the basic principle of division in which the size of the remainder is dependant upon the size of the input. Mathematically it is impossible for the size of the remainder to not be dependant upon the size of



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the input quantity and the divisor. It is not mathematically possible for the size of at least one of the output sub-packets to be dependent upon the size of the input packet.

In regards to applicants argument that AAPA discloses a scheduling method for a base station. Namely, the receiver with the most favorable channel conditions (for example, the highest measured signal-to-interference ratio (SIR)). The calculated data rate is reported to the base station to schedule when data transmission is to occur for a receiver: This does not alleviate the fact that AAPA teaches “the receiver”...”reports the calculated data rate to the base station” (Page 1 lines 29-31). Bruckman teach a rate indication message. However, Bruckman teaches the rate indication message coming from the front end 30 which is in the transmitter not from the receiver. AAPA teaches the rate indication message coming from the receiver. The examiner notes that Tiedemann, Jr. et al also teaches the receiver 6 transmits a requested transmission rate message to the transmitter 4 (Column 11 lines 44-45) thus AAPA is redundant for what is also taught in Tiedemann, Jr. et al.

In regards to applicants argument that Tiedemann does not select a “preferred transmission rate based upon [the transmission rate request]”: The claim language states the “the first transmission rate is different from and based on a data rate for transmitting the first encoder sub-packet indicated in a first rate indication message from a receiver” Tiedemann teaches the receiver 6 transmitting a maximum supportable transmission rate to the transmitter 4. Column 11 lines 44-45 and Tiedemann teaches in Figure 8 step 224: “Assign the Scheduled Rate Based on the Max Transmission Rate, Preferred Rate, and/or Requested Rate (from Remote Station)” The Scheduled rate is the rate at which the transmitter transmits and is based on the Requested rate from the receiver. Only if requested rate is the minimum transmission rate from the

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supportable maximum requested rates will the scheduled rate be the requested rate (Column 11 line 65 to Column 12 line 8). Otherwise the scheduled rate is different from and based on the rate indicated in a rate indication message from the receiver. The examiner further notes that the scheduled rate is based on 3 factors of which the requested rate is only one.

In regards to applicants argument that in a telephone interview the examiner indicated that the he would need to perform further review of Tiedemann to determine what factors for selecting the rate are and if there is a connection to the requested rate: As can be seen from the rejection a further review of Tiedemann was performed. The rate required (used in calculating the preferred rate) is not necessarily the requested rate. This does not alleviate the transmission rate of Tiedemann is both based upon AND different from the requested rate (As made clear in figure 7 and figure 8. Note Figure 8 is step 202 of figure 7).

In regards to applicants argument regarding the motivation to combine: The combination would have allowed for multiple receivers as is provided in Tiedemann, Jr. et al or alternatively would have allowed wireless communication as is provided in Tiedemann, Jr. et al. The test of obviousness is:

"whether the teachings of the prior art, taken as a whole, would have made obvious the claimed invention," *In re Gorman*, 933 F.2d at 986, 18 USPQ 2d at 1888. (emphasis added)

Subject matter is unpatentable under section 103 if it "'would have been obvious . . . to a person having ordinary skill in the art.' While there must be some teaching, reason, suggestion, or motivation to combine existing elements to produce the claimed device, it is not necessary that the cited references or prior art specifically suggest making the combination." *In re Nilssen*, 851 F.2d 1401, 1403, 7 USPQ 2d 1500, 1502 (Fed. Cir. 1988).

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"Such suggestion or motivation to combine prior art teachings can derive solely from the existence of a teaching, which one of ordinary skill in the art would be presumed to know, and the use of that teaching to solve the same [or] similar problem which it addresses." *In re Wood*, 599 F.2d 1032, 1037, 202 USPQ 171, 174 (CCPA 1979).

"In sum, it is off the mark for litigants to argue, as many do, that an invention cannot be held to have been obvious unless a suggestion to combine prior art teachings is found *in* a specific reference."

Entire quote from *In re Oetiker*, 24 USPQ 2d 1443 (CAFC 1992).

Accordingly, it is not required to disclose or specifically suggest particular elements. Instead the measure is what the teachings would suggest to one of ordinary skill in the art, not what the art specifically suggests.

In regards to applicants argument Buchholz fails to make up the deficiencies of Bruckman, AAPA, and Tiedemann: Buchholz was not cited for teaching the features in Bruckman, AAPA, and Tiedemann. Buchholz was cited for teaching the packet format.

In regards to applicants argument to the taking of Official notice that modems were well known and the motivation to combine. Since the examiner has noted that Bruckman expressly teaches the use of a modems this argument is moot.

#### **(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

This examiner's answer contains a new ground of rejection set forth in section (9) above. Accordingly, appellant must within **TWO MONTHS** from the date of this answer exercise one

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of the following two options to avoid *sua sponte* **dismissal of the appeal** as to the claims subject to the new ground of rejection:

(1) **Reopen prosecution.** Request that prosecution be reopened before the primary examiner by filing a reply under 37 CFR 1.111 with or without amendment, affidavit or other evidence. Any amendment, affidavit or other evidence must be relevant to the new grounds of rejection. A request that complies with 37 CFR 41.39(b)(1) will be entered and considered. Any request that prosecution be reopened will be treated as a request to withdraw the appeal.

(2) **Maintain appeal.** Request that the appeal be maintained by filing a reply brief as set forth in 37 CFR 41.41. Such a reply brief must address each new ground of rejection as set forth in 37 CFR 41.37(c)(1)(vii) and should be in compliance with the other requirements of 37 CFR 41.37(c). If a reply brief filed pursuant to 37 CFR 41.39(b)(2) is accompanied by any amendment, affidavit or other evidence, it shall be treated as a request that prosecution be reopened before the primary examiner under 37 CFR 41.39(b)(1).

Extensions of time under 37 CFR 1.136(a) are not applicable to the TWO MONTH time period set forth above. See 37 CFR 1.136(b) for extensions of time to reply for patent applications and 37 CFR 1.550(c) for extensions of time to reply for ex parte reexamination proceedings.

Respectfully submitted,

Paul R. Myers




**PAUL R. MYERS**  
**PRIMARY EXAMINER**


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A Technology Center Director or designee must personally approve the new ground(s) of rejection set forth in section (9) above by signing below:

Conferees:

  
**LYNNE H. BROWNE**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2100**

  
**Jack B. Harvey, Director**  
**Technology Center 2100**

  
**REHANA PERVEEN**  
**SUPERVISORY PATENT EXAMINER**